

(12) UK Patent Application (19) GB (11) 2 314 112 (13) A

(43) Date of A Publication 17.12.1997

(21) Application No 9612596.8

(22) Date of Filing 15.06.1996

(71) Applicant(s)

Geoffrey Phillip Sankey
22 Kingsway, Westcliff on Sea, ESSEX, SS0 9XF,
United Kingdom

Christopher William David Yeomans
63 Fairfax Drive, Westcliff-on-Sea, Essex, SS0 9AG,
United Kingdom

(72) Inventor(s)

Geoffrey Phillip Sankey
Christopher William David Yeomans

(74) Agent and/or Address for Service

Alec Moses Messulam
24 Broadway, LEIGH-ON-SEA, Essex, SS9 1BN,
United Kingdom

(51) INT CL⁶

E06B 3/88

(52) UK CL (Edition O)

E1J JGR

(56) Documents Cited

GB 2275291 A

GB 2261012 A

GB 2254355 A

NL 830003162 A

US 5220708 A

US 2694234 A

(58) Field of Search

UK CL (Edition O) **E1J JGR**

INT CL⁶ **E05D 11/00 , E06B 3/88 7/28**

Online: **World Patents Index, EDOC.**

(54) Door jamb finger guard

(57) A door jamb finger guard 16 for a swinging door 10 comprises four elongate strips 16a - 16d which are sequentially hinged to one another along their long edges, each of the free long edges of the first 16a and fourth 16d strips being pivotably connected to a long edge of a respective one of two further elongate fixing strips 18a, 18b one of which, in use, is secured to the door 10 and the other to the door jamb 12. The finger guard is shaped such that in the closed position of the door, three of the strips 16a, 16c and 16d lie generally parallel to the door 10 or the door jamb 12 and the fourth strip 16b extends at angle to the door 10 and the door jamb 12.

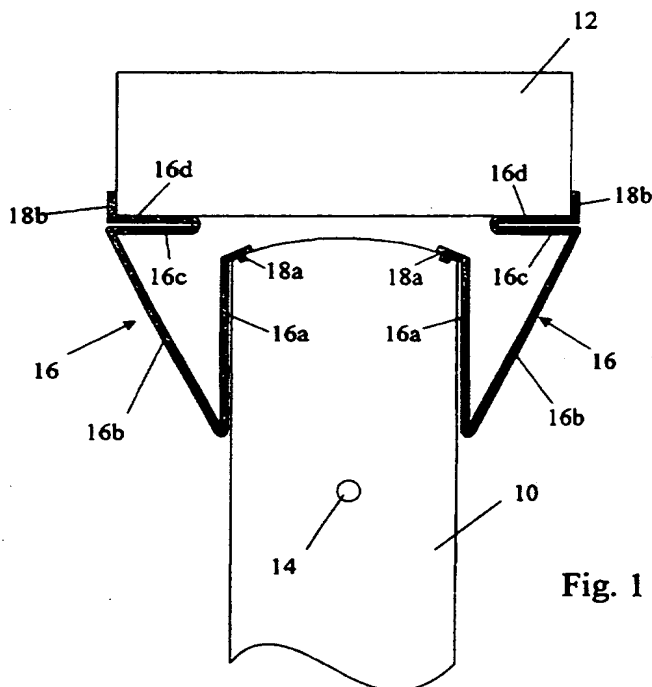


Fig. 1

GB 2 314 112 A

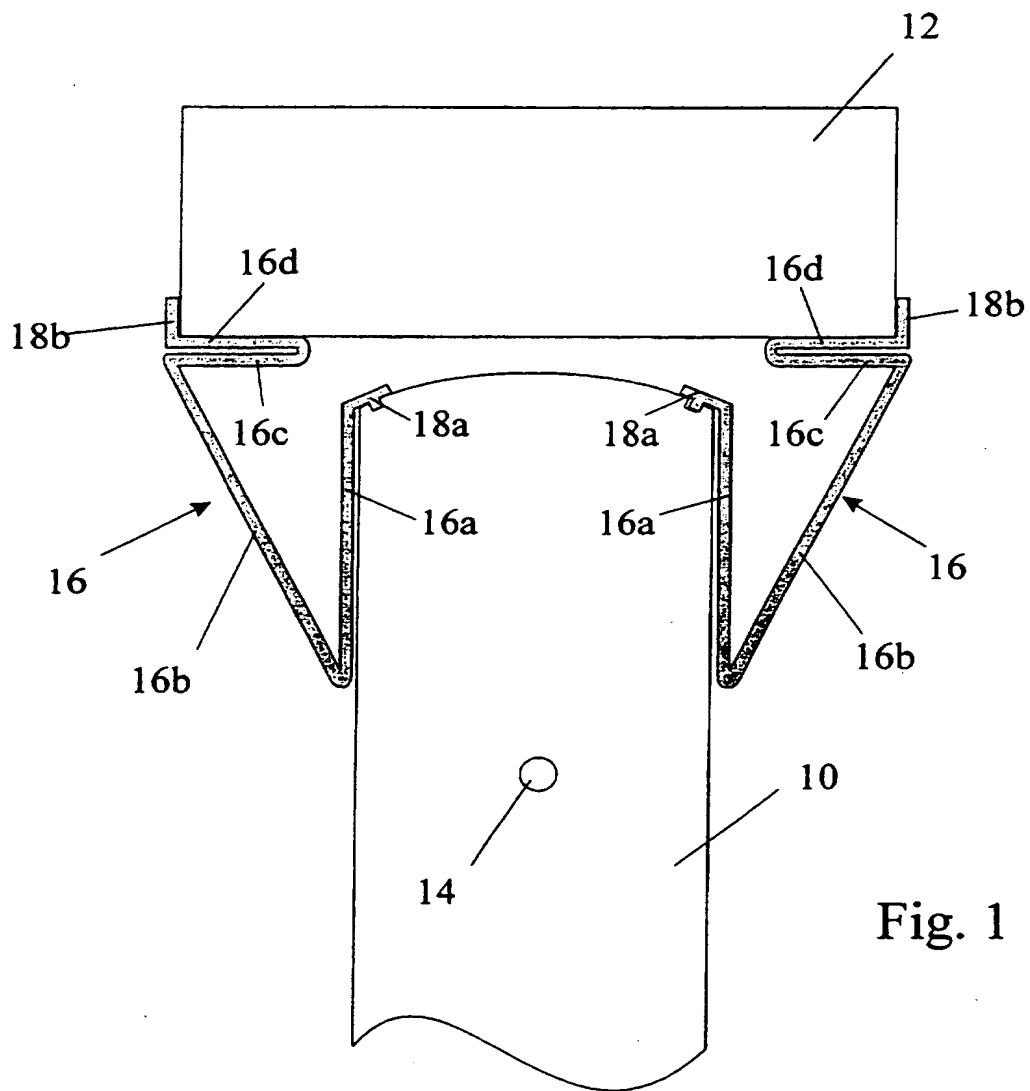


Fig. 1

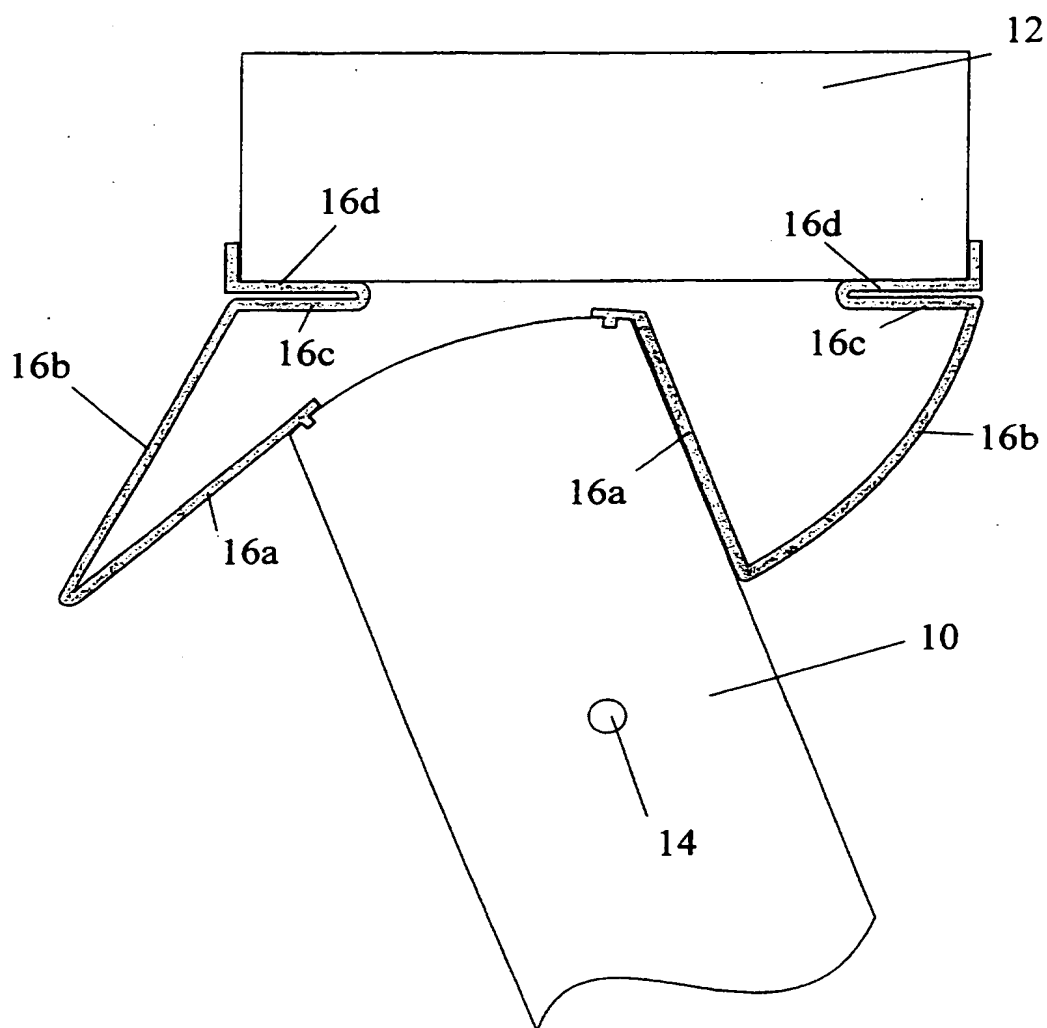


Fig. 2

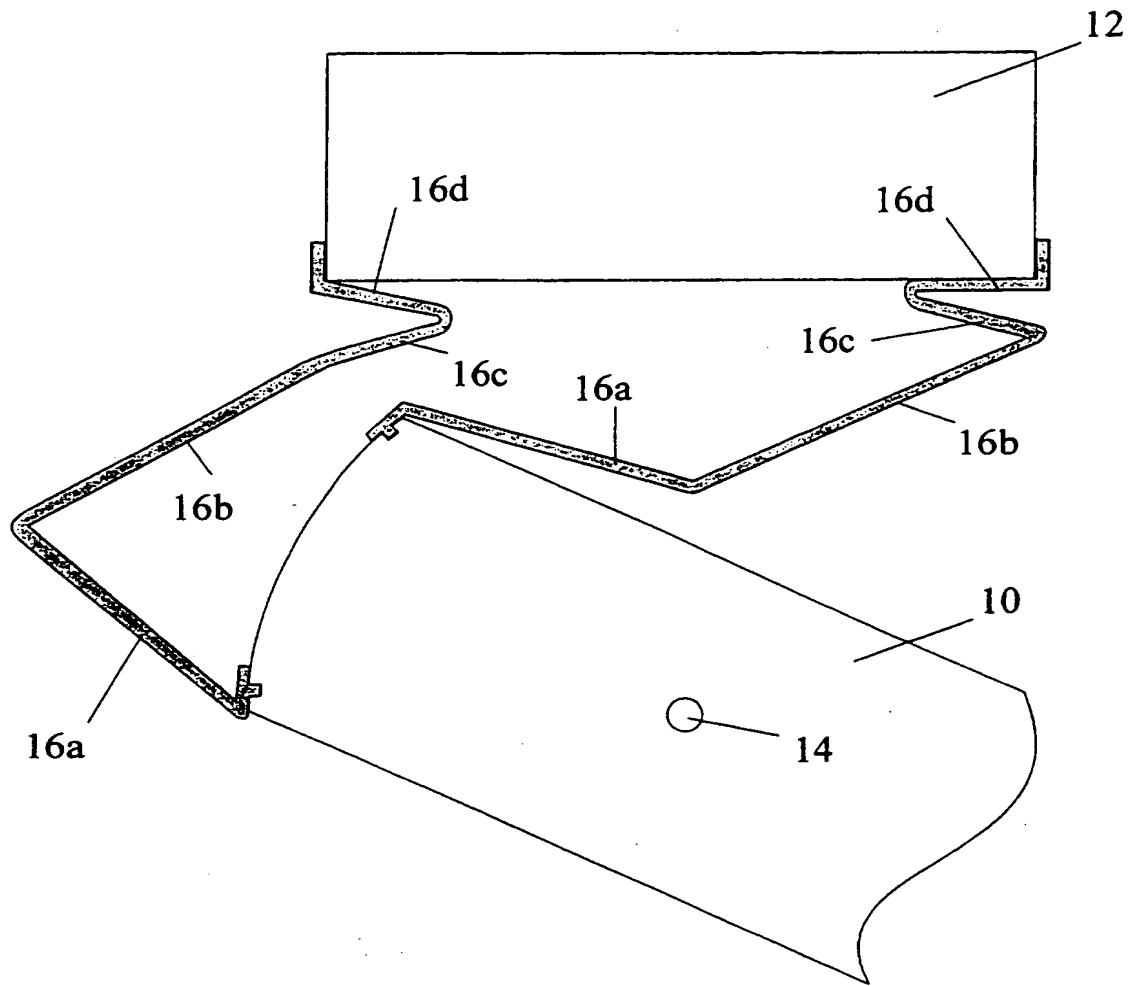


Fig. 3

Door Jamb Finger Guard

The present invention relate to a door jamb finger guard.

5 Injuries are often caused, especially to children, by
fingers being trapped between a door and a door stop or a
door jamb and guards have been proposed in the past which
comprise a folding web of plastics material stretched over
the gap between and door and the door jamb when the door is
10 open. It is essential in such guards that they be naturally
sprung away from the hinge so as to push away any obstacle
as the door closes.

Finger guards that use two or more strips hinged to one
15 another along their long edges and flexibly connected to the
door and door jamb along their free edges have been proposed
in the prior art but the known finger guards are not
suitable for use with a swinging door, that is to say a door
that can pivot through 90° or more in both directions away
20 from its central closed position, to enable it to be opened
by pushing or pulling. The known finger guards would
function correctly when the door is swung in one opening
direction but would interfere with the movement of the door
when swung in the opposite opening direction.

25 The invention therefore seeks to provide a finger guard that
is suitable for a swinging door as described above.

According to the present invention, there is provided a door
30 jamb finger guard for a swinging door comprising four
elongate strips which are sequentially hinged to one another
along their long edges, each of the free long edges of the
first and fourth strips being pivotably connected to a long
edge of a respective one of two further elongate fixing
35 strips one of which, in use, is secured to the door and the
other to the door jamb, wherein in the closed position of
the door three of the strips lie generally parallel to the

door or the door jamb and the fourth extends at angle to the door and the door jamb.

5 Preferably the four strips consist, in sequence, of a first strip that is secured for pivoting relative to the door about a line near one edge of the door and lying against the door when the door is closed, a second strip that is wider than the first strip and forms an acute angle with the first strip when the door is closed, a third strip which when the door is closed lies parallel to the door jamb and forms an acute angle with the second strip and a fourth strip which is folded back over the third strip and lies between the third strip and the door jamb when the door is closed.

15 The further strips connected to the free ends of the four strips may be secured to the door and door jamb or door stop by an adhesive or other fixing means such as screws or nails.

20 Conveniently, the guard may be formed in one piece by extruding a plastics material which is suitable for forming film hinges.

25 The guard should be formed of a length covering all the parts of the door gap which present a hazard but it is not essential for the strips to be the height of the entire door.

Brief description of the drawings

30 The invention will now be described further, by way of example, with reference to the accompanying drawings, in which :

35 Figure 1 is a horizontal section through a door and door jamb fitted with two finger guards of the invention, the door being shown in its closed position, and

Figures 2 and 3 show the door and finger guards of the invention as the door is opened progressively.

5 The drawings show a swinging door 10 that can pivot about a vertical axis 14 through 180° or slightly more relative to its door jamb 12. To prevent accidents by fingers being trapped between the door 10 and the door jamb 12, both sides of the door are fitted with a finger guard 16 which is a plastics extrusion that is formed of strips extending over
10 at least part of the height of the door 10. The longer edges of the strips are flexibly joined to one another by hinge lines that may either be formed by score lines or preferably by extruding plastics materials of different composition at the same time.

15 The finger guard 16 comprises a first strip which in the closed position shown in Figure 1 lies parallel to the face of the door 10. A short fixing strip 18a, in this case designed to be inserted into a recess in the door intended to receive a draught excluder, is used to attach one edge of the strip 16a to the edge of the door. At its free end, the first strip 16a is pivotably connected to a second strip 16b which in Figure 1 lies at an acute angle to the door 10. The other end of the second strip 16b is connected to a
25 third strip which in Figure 1 lies parallel to the door jamb 12 at an acute angle to the second strip 16b. The other end of the third strip 16c is in turn connected to a fourth strip 16d which also lies parallel to the door jamb 12 being doubled back to lie between the third strip 16c and the door
30 jamb 12. The other end of the fourth strip 16d is connected to a second fixing strip 18b that is secured to the door jamb, for example by glue, screws or nails. The two fixing strips 18a and 18b may be varied as required to assist in their correct attachment to the door 10 and the door jamb
35 12.

The manner in which the finger guard of the invention acts will be readily appreciated from the drawings which show the positions adopted by the various sections of the two finger guards 16 as the door is progressively opened. It will be
5 noted in particular that in no position do the finger guards inhibit the movement of the door. In the position shown in Figure 2, the flexing of the section 16b applies a small force to the door sufficient to bias the door into its closed position, but it does not present excessive
10 resistance to opening movement. It will be noted also that in all positions of the door, the guard seals off the gap between the door 10 and the door jamb so that nothing may be pushed intentionally or accidentally into the gap.

CLAIMS

1. A door jamb finger guard for a swinging door comprising four elongate strips which are sequentially hinged to one another along their long edges, each of the free long edges of the first and fourth strips being pivotably connected to a long edge of a respective one of two further elongate fixing strips one of which, in use, is secured to the door and the other to the door jamb, wherein in the closed position of the door three of the strips lie generally parallel to the door or the door jamb and the fourth extends at angle to the door and the door jamb.

2. A door jamb finger guard as claimed in claim 1, wherein the four strips consist, in sequence, of a first strip that is secured for pivoting relative to the door about a line near one edge of the door and lying against the door when the door is closed, a second strip that is wider than the first strip and forms an acute angle with the first strip when the door is closed, a third strip which when the door is closed lies parallel to the door jamb and forms an acute angle with the second strip and a fourth strip which is folded back over the third strip and lies between the third strip and the door jamb when the door is closed.

3. A door jamb finger guard as claimed in claim 1 or 2, wherein the guard is formed in one piece by extruding a plastics material.

4. A door jamb finger guard constructed, arranged and adapted to operate substantially as herein described with reference to and as illustrated in the accompanying drawings.



Application N : GB 9612596.8
Claims searched: 1-4

Examiner: John Rowlatt
Date of search: 24 July 1996

Patents Act 1977
Search Report under Section 17

Databases searched:

UK Patent Office collections, including GB, EP, WO & US patent specifications, in:

UK Cl (Ed.O): EIJ: JGR.

Int Cl (Ed.6): E06B: 3/88, 7/28.
E05D: 11/00.

Other: Online: World Patents Index, EDOC.

Documents considered to be relevant:

| Category | Identity of document and relevant passage | Relevant to claims |
|----------|--|--------------------|
| Y | GB2275291A (SANKEY & YEOMANS) - see figure 2; equivalent EP 0611410, WO 93/09325, US 5419084 | 1-3 |
| Y | GB2261012A (SANKEY & YEOMANS) - see figure 2; published priority to GB 2275291. | 1-3 |
| Y | GB2254355A (RENTON) - see figure 3; equivalent WO 92/15763. | 1-3 |
| X | US5220708A (LUCAS & LASSON) - see figure 1. | 1-3 |
| Y | US2694234A (S S ROBY et al.) - see figures 2-4. | 1-3 |
| Y | NL8303162A (HOUWELING) - see figures 3 & 5. | 1-3 |

| | | | |
|---|---|---|--|
| X | Document indicating lack of novelty or inventive step | A | Document indicating technological background and/or state of the art. |
| Y | Document indicating lack of inventive step if combined with one or more other documents of same category. | P | Document published on or after the declared priority date but before the filing date of this invention. |
| & | Member of the same patent family | E | Patent document published on or after, but with priority date earlier than, the filing date of this application. |